



## TELECOM MARKET SUMMARY: CHINA

### Key Statistics

Population	1,336,718,015 (July 2011 est.)
GDP	\$9.872 trillion (2010 est.)
Per capita GDP	\$7,400 (2010 est.)
Main lines	313.68 million (2009)
Teledensity	23.31 % (2009)
Mobile subscribers	747,214,000 (2009)
Mobile penetration	55.52% (2009)
Internet users	389 million (2009)
Internet penetration	8.29 % (2009)
Broadband subscribers	103,978,000 (2009)
Spending on telecom equipment and services	\$137,055.1 million (2010)
U.S. equipment exports to market	\$623,814,487 (2010)

Sources: CIA World Factbook, USITC, ITU, Worldwide Black Book, and BMI

### Overview

China has one of the world's fastest growing telecommunications markets and operates the world's largest fixed (wireline) and wireless telecommunications networks. There are more than 900 million telephone connections, with 641,230,016 mobile and 340,809,984 fixed line subscribers in the country. Spending on telecom equipment totaled around \$16.635 million in 2010, while spending on telecom services was approximately \$120.419 million. Rates of new subscriber growth and infrastructure investment have slowed the past three years, however. The development of telecommunications has proceeded unevenly throughout the country, with the provinces along the Eastern seaboard containing nearly one-half of China's telecom users. China's western provinces and rural population are still greatly underserved, and the government is anxious to foster telecom development in those regions.

### Administration and Regulation of the Telecom Sector

The State Council is the government body in charge of all legislative issues in China, including those regarding telecommunications. Regulations and administrative measures issued in 2000 and 2002 lay out the principles and requirements for telecom licensing, interconnection, service standards and charges, network construction, telecom security, and penalties for violating the regulations. However, many regulations are unclear, subject to interpretation, and sometimes ignored by provincial authorities or the carriers themselves. A draft telecommunications law is before the State Council, but neither its specifics nor a timetable for its enactment has been made public. One of its provisions is expected to establish a universal service obligation to help fund the roll out of telecom infrastructure in China's underserved areas.

The Ministry of Industry Information (MII), an part of the State Council, has responsibility for enacting telecom policy. MII also develops equipment standards, issues licenses for the provision of all telecom services, allocates spectrum, develops tariff rates for telecom services, and manages the telecommunications numbering system and Internet domain name registration. Although it functions as the telecom regulator, MII faces inherent conflicts of interest, as it

is charged to foster the development of China's telecom equipment industry and to oversee Chinese operators that are state-owned.

State organizations permitted to operate telecommunications networks include the People's Liberation Army (PLA) and provincial Post and Telecommunications Administrations (PTAs). Under the MII are 30 PTAs that implement MII's telecom policy. Telecommunications networks are established region-by-region. In theory, the PTAs have limited influence on the formulation of regional development plans, but in the drive to attract outside investment, many PTAs, especially in wealthy southern China, plan and develop networks fairly autonomously. PTAs have the authority to tender telecom equipment contracts to domestic and international firms, subject to MII regulation and approval.

The State Administration of Radio and Television (SARFT) regulates the television and broadcasting sectors and is responsible for controlling content on radio, film, and television. SARFT has sought to expand the capabilities of cable television networks to provide Internet access and telecom services. These efforts have brought it into conflict with MII, while MII has indicated an interest in licensing radio and TV networks. It will be up to the State Council to sort out the future of the convergence in China's communications industry.

### **Telecom Service Operators**

The three major telecom service operators in China, all majority government owned, are:

China Mobile was formed out of China Telecom in 2000 and has subsidiary companies in 25 provinces including Hong Kong. It is the leader of the mobile market. By 1998, it controlled 95 percent of China's mobile market, but it now faces stiff competition from Unicom. Today it controls close to 60% of the market. The two firms have engaged in unofficial price wars flouting MII's recommended tariffs. China Mobile operates GSM networks, has nearly 500 million subscribers. China Mobile has transferred all its networks to China Mobile Hong Kong. The company has an alliance with Vodafone. China Mobile acquired China Railcom's fixed-line assets.

China Telecom, established in 1958, broken up in 1999, and reformed in 2002, operates 20 wireline networks in China's southern and western provinces. With its 90.520 million subscribers, it collects 10.8 percent of China's telecom service revenues. China Telecom put in place most of China's core broadband backbone network. Its wireless local loop (WLL) service has been a commercial success. China Telecom has a strategic partnership with Deutsche Telekom.

A second wireline carrier, China Netcom, was formed in 1999 and serves China's 21 northern provinces and cities (including the city of Beijing), has 94 million subscribers, and a 16 percent market share of revenues. Both China Netcom and China Unicom are permitted to compete within each other's territory. It too is licensed to provide a full range of local, long distance and international services. China Netcom has links with Singapore Telecom and acquired Global Crossing's Asia network.

China Unicom, established in 1994, is a consortium of 17 Chinese telecom organizations and operates two mobile services based on GSM and CDMA standards. It is the second largest mobile operator. China Unicom is the only full-service provider in China, although it only recently began providing long distance and international services. It has been unable to mount a serious challenge to China Telecom, although it is allowed to price its services up to 10 percent lower than the government's prescribed rates. China Unicom has a partnership with Hutchison Whampoa of Hong Kong and an alliance with Australia's Telstra on CDMA cooperation. China Unicom acquired China Netcom's fixed-line assets in 2009.

China Railcom, established in 2000, is fully government owned. It manages the second largest fixed communications network in China and is offering public telecom services now in 500 cities. It will cover 28 of China's 31 provinces, but lacks experience in offering commercial services and collecting revenues. Currently it has only a 1.5 percent market revenue share and could well be a target of future mergers or acquisitions.

### **Telecom Equipment Market**

The large U.S. and other foreign vendors have established operations in China, usually joint ventures with Chinese firms, and they work directly with the Chinese carriers to design and sell their products. Smaller firms looking for export opportunities are advised to start with agents and distributors that have the necessary resources, e.g., good connections and technical support.

The best sub-sector prospects within the telecommunications sector include:

- mobile communications including 3G and value-added service platforms
- value-added capabilities for e-mail and web browsers and the ability to download ringing tones, logos/images, music, videos, games, stock market quotations
- broadband access network equipment including wireless LAN, LMDS, and ADSL

- operational management systems like BOSS and multiple service platforms
- public safety (emergency response) systems

### **Challenges in the Telecom Market**

According to a report by the United States Information Technology Office in Beijing, the telecom market in China faces these challenges:

- A saturated market for basic voice and unmanaged data services in major geographies. A telecom market characterized by undisciplined pricing and promotional tactics and competition among incumbents. The focus is on gaining market share rather than on increasing total market size through added value innovation.
- Generally poor availability of value-added services (VAS) due to limited competition and uncooperative basic network facility providers. This, in turn, reduces incentives for innovation and improved quality of service and constrains the emergence of world-class operating capabilities, stymies the development of partner and customer care management capabilities, and provides little incentive to improve customer service regularly.
- Significant margin and profit pressure in basic services, leading to growing investor concerns and poor share-price performance. China's incumbent players remain focused at a basic stage of service deployment despite the growing demand from multinational companies doing business in China for higher quality, value-added enterprise services that, in turn, can create carrier value as market differentiators.
- High levels of regulatory uncertainty and perceived regulatory risk over third-generation (3G) mobile licenses, interconnection rules and charging principles, wireless local loop systems, new licenses, scope of the service classification catalogue, and so on. These regulatory uncertainties greatly deflate share prices and constrain investment by incumbents and new entrants alike.

### **Telecom Policy and Regulatory Issues**

The U.S. telecom industry has identified a number of concerns, problems and market access barriers that limit its ability to participate fully in China's telecom market. These issues include:

**Draft Telecommunications Law:** China has been talking about enacting a comprehensive telecommunications law for many years. The U.S. Government submitted comments to the Chinese government in September 2005. The draft law was reviewed by 40 other Chinese government agencies and submitted to the State Council Legislative Affairs Office last year for further review. Current reports are that the bill is before the State Council.

**MII will play a key role in implementing the legislation once it is enacted.** Lack of transparency in the regulatory and policymaking process is one of U.S. industry's main concerns and adds to uncertainty and confusion about what existing Chinese regulations mean and how MII may interpret them.

**Independent Telecom Regulatory Authority:** Fair and effective market competition in telecom services cannot develop without an independent and impartial "referee" that establishes and has the power to enforce its regulations. In China, MII sets telecom policy and licenses and regulates the carriers and is not regarded as an impartial body.

Under its WTO commitments, China has committed to establishing an independent telecom regulator that is separate from and not accountable to any supplier of basic telecommunications services. In addition, the decisions of and procedures used by the regulator should be impartial with respect to all market participants.

China has not set up such a body yet, but MII continues to regulate the industry. MII claims it is "independent" as it claims it is not controlling the business operations of China Telecom and other state-owned carriers. However, MII appoints top executives to the Chinese operators, and is widely perceived to craft policies to favor the incumbent Chinese firms. MII cannot serve as an independent regulator as long as it oversees the development of China's telecom and IT industries.

**Joint Venture Requirements:** U.S. telecom firms must form a joint venture with a Chinese firm to offer telecom services, and MII interprets that to mean that the U.S. joint venture partner must be a Chinese telecom company, all of which are state-owned. China apparently is interpreting its rules to limit potential JV partners to existing State-owned operators, based on the circular rule that the partner needs experience, and since they have licensed no other Chinese operators, no one else has the requisite experience.

Since the currently eligible Chinese partners are state-owned and often are dominant operators in their service territories, the foreign partner finds itself completely dependent on the Chinese carrier for the introduction and expansion of new services—which the Chinese partner has little incentive to support, since the JV would likely be competing against the parent.

**Advanced Wireless Services (3G):** There are currently 3 operators using 3G. China Telecom (CDMA2000), China Mobile (TD-SCDMA), and China Unicom (W-CDMA). 3G accounted for 5.6% of the total mobile market by 2010 and is expected to rise to almost 36% as of 2015. By March 2010, there were 18.8 million 3G subscribers. The U.S.

Government has a policy of technology neutrality for standards setting and spectrum licensing and opposes any Chinese effort to mandate or favor a specific standard. It is believed that commercial 4G deployment would start in 2014.

**Type Approval Process for Telecom Equipment:** Currently in China, telecom terminal equipment must pass through multiple governmental mandatory certification and licensing processes and corresponding testing before they may be sold there. The duplicative certifications requirements led to significant delays in launching new products, and substantial costs borne through government fees and lost time from the market. U.S. industry would like to see the process unified and streamlined.

**Limitations on Foreign Investment:** Companies offering value-added services in China cannot have more than 50 per cent foreign ownership; a firm offering mobile or fixed line domestic or international services cannot have more than 49 per cent foreign ownership. This prevents U.S. firms from exercising operational and management control of their companies in China.

**Capitalization Requirements for a Basic Telecom License:** China has established the world's highest capitalization requirement that a company must meet before it is eligible to receive a license to provide basic telecom services in China. There is a \$240 million registered capital requirement for Chinese-joint venture companies that want to provide basic (mobile and fixed-line voice and data) telecom services. U.S. industry argues that this licensing fee is a significant barrier to entry. Building a nationwide or regional communications network is not a commercially viable market entry strategy for U.S. telecom firms. U.S. industry wants this requirement eliminated, or reduced to a level that reflects the true capitalization needs for a new entrant. Under the JCCT Telecom Dialogue, the U.S. Government has discussed this issue with the Chinese and submitted recommendations for resolving it. MII has said the issue is under review and that the requirements will be reduced, but has not said when that will happen and by how much.

**Resale of Telecom Services:** It appears that no foreign company has a license to resell domestic or international telecommunications services in China. China has a WTO obligation to allow resale, but has not issued any licenses to firms to offer this service.

MI has stated that there is no prohibition on resale, but first a company must be issued a license to provide basic telecom services. U.S. firms have not done so because of the capitalization requirement (see above).

**Scope of Permitted Value-Added Services:** China does not license U.S. carriers to provide sophisticated international value-added services, because of MI's extremely narrow view of what constitutes a value-added service. These IP-VPN services are almost universally regarded as value-added services and are provided in most countries under value-added services licenses. China's regulator (MI) has construed the meaning of value-added services in its WTO commitment schedule so narrowly that important offerings, such as IP-VPN services demanded by global enterprises, are excluded. Other firms that seek to provide hosting services and other distributed application and content delivery services are uncertain whether they can operate under a value-added services license.

#### **Contact Information: China**

Ministry of Information Industry (MI)  
<http://www.mii.gov.cn>

Ministry of Commerce  
<http://www.mofcom.gov.cn>

China Telecom  
<http://www.chinatelecom.com.cn>

China Netcom  
<http://www.chinanetcom.com.cn>

China Mobile  
<http://www.chinamobile.com>

China Unicom  
[http://www.chinaunicom.com.cn/chinaunicom/firstlist\\_0.html](http://www.chinaunicom.com.cn/chinaunicom/firstlist_0.html)

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